

Appl. No. 10/709,197
Amndt. dated September 08, 2005
Reply to Office action of June 14, 2005

REMARKS

1. Elections/Restrictions

The examiner has indicated that the applicant is required under 35 U.S.C. 121 to restrict the patent application by selecting a single disclosed species for prosecution of the claimed invention:

- 5 Series I. Claims 1-9, drawn to a variable gain amplifier with a voltage gain having exponential function and independent from Voltage temperature (Fig.4).
- 10 Series II. Claims 10-15, drawn to a Voltage temperature amplifier having voltage output dependant on the thermal voltage of the amplifier (Fig.7).

As discussed via telephone conversation with Mr. Margo on 6/8/05, a provisional election was made to prosecute the invention described in Series II, claims 10-15

15 Accordingly, Claims 1-9 are cancelled without prejudice or disclaimer to the subject matter thereof, however, the applicant reserves the right to file divisional applications based on these claims.

2. Response to Claim Rejections:

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Independent claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Setty Pub. No.: US 2001/0006353. Applicant asserts that this claim is not anticipated by Setty for reasons listed below.

The examiner has stated that "Fig. 3 of Setty disclose a proportional_to_Vt voltage

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amplifier, comprising: a transconductance unit (Q0, Q1) for generating a first current (IQ1) according to a first input voltage (x, Vb2); and a transresistance unit (Q3, Q4), coupled to a reference voltage (Vref), for generating a first output voltage (78) according to a first current (IQ1)".

5 In actuality, the first output voltage (78) is generated by the second current (IQ3), as opposed to the first current (IQ1). Applicant asserts that the transistor pair (Q4,Q5) form a current mirror, and as such, current (IQ1) follows that of (IQ3). This is evidenced by the collector-base connected transistor (Q5), which serves as a reference for (Q4). Therefore, since current (IQ1) of transistor (Q4) mirrors current (IQ3) of transistor (Q5), it cannot be
10 responsible for generating the first output voltage (78). According to Fig.3 of Setty, output voltage (78) is generated in accordance to voltages (Vref, Vb1, Vb2).

This is in contrast to the present invention. An embodiment as shown in Fig. 7 of the present invention will show that the first output voltage is generated according to the first current (I5). This embodiment also incorporates a current mirror 740, which is reversed with respect to the current mirror as utilized by Setty (Q4,Q5) in such a way that (I6) mirrors (I5). Therefore, the present invention generates a first output voltage according to a first current (I5).

For the reasons listed above, the applicant asserts that claim 10 is not anticipated by Setty, and respectfully asks for reconsideration of this claim.

20 Claims 11-15 should also be reconsidered if claim 10 is found allowable. These claims are dependant through the mother claim 10, and as such, applicant requests reconsideration for dependant claims 11-15 should claim 10 be allowed.

3. Allowable Subject Matter

25 Additionally, New claims 16-24 were added. The applicant indicates that independent

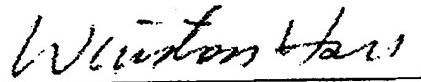
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Claim 16 is formed by merging all the limitations of original claim 11 into original claim 10, with the original dependant claim 11 being stated as would be allowable by the examiner if rewritten in independent form including limitations of the base claim. Claims 17-20 are copied from the original claims and only amended to reflect changes with reference to new 5 independent claim 16. Similarly, independent claim 21 is formed by merging the limitations of original dependant claims 12 and 13 into original base claim 10. Applicant points out that this claim should be considered allowable as indicated by the examiner if rewritten to include limitations of the defendant claims. Claims 22-24 are copied from the original claims presented and amended to reflect changes in newly formed claim 21. No new subject matter 10 is entered through new claims 16-24.

Applicant respectfully requests consideration of claims 10-24.

Sincerely yours,

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